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Richland Operations Office
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14-AMRP-0287

SEP 23 2014

Ms. J. A. Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

Dear Ms. Hedges:

DANGEROUS WASTE COMPLIANCE INSPECTION AT HANFORD'S 400 AREA WASTE MANAGEMENT UNIT (WMU), RCRA ID WA7890008967 ON SEPTEMBER 19-20, 2011

References: (1) Ecology ltr. to D. S. Shoop, RL, and J. C. Fulton, CHPRC, from K. A. Conaway, "Re: Dangerous Waste Compliance Inspection at Hanford's 400 Area Waste Management Unit (WMU), RCRA ID WA7890008967 on September 19-20, 2011," 14-NWP-136, dtd. July 11, 2014.

(2) RL ltr. to J. A. Hedges, Ecology, from M. S. McCormick, "Response to Washington State Department of Ecology's (Ecology) Dangerous Waste Compliance Inspection at the Hanford 400 Area Dangerous Waste Management Unit Resource Conservation and Recovery Act (RCRA) Identification Number WA7890008967 on September 19 and 20, 2011," 13-ESQ-0058, dtd. August 5, 2013.

(3) Ecology ltr. to M. S. McCormick, RL and J. C. Fulton, CHPRC, from K. A. Conaway, "Re: Department of Ecology's (Ecology) Dangerous Waste Compliance Inspection at Hanford's Fast Flux Test Facility, RCRA ID# WA7890008967," 13-NWP-064, dtd. June 17, 2013.

This letter responds to the State of Washington Department of Ecology's (Ecology) July 11, 2014, request for additional information on the disposal of instruments and tubing that contain a small amount of sodium potassium (NaK), Reference (1). Specifically, Ecology asked how the NaK components may be disposed of, or if it is feasible, to reclaim this material as sodium/potassium hydroxide.

As described in the previous response to Ecology's inspection of the 400 Area Waste Management Unit, Reference (2), a small amount (less than 2 cups) of NaK is contained within the transducer instrumentation and associated capillary tubing. Due to the configuration of the instruments and the small volume of material, reclamation of the NaK may not be feasible. Treatment followed by disposal is an option. Treatment of the NaK components is not currently available onsite. In order to provide additional information to Ecology, an initial review of

offsite treatment options was performed. The initial review identified that the NaK contained in the transducer components could be treated at one or more offsite facilities in Tennessee. This would entail packaging the NaK containing waste into Department of Transportation (DOT) compliant packaging and shipment of the waste to an offsite facility. Residues from the treatment process would be returned to Hanford for disposal.

While the information gathered confirmed that offsite treatment of the NaK containing components is possible, a high cost in relation to the benefit obtained militates against sending the waste offsite for treatment. It is clearly recognized that the waste will need to be treated prior to disposal, but such treatment may be more appropriately performed on the Hanford Site when processes and facilities are available to treat bulk sodium and other higher priority cleanup and waste management activities have been accomplished.

The Hanford Resource Conservation and Recovery Act (RCRA) permit, Operating Group Unit 16, specifically identifies NaK as present at this unit and provides appropriate authorization for management of this material at the Interim Storage Area (ISA). The management of NaK in the ISA is safely and compliantly performed as described by the approved permit provisions for operating Unit Group 16. The very small volume of NaK (approximately two cups), the current site budget, waste management, and cleanup priorities have led the U.S. Department of Energy Richland Operations Office (RL) and the CH2M HILL Plateau Remediation Company (CHPRC) to conclude that deferral of treatment at this time is appropriate. RL and CHPRC believe that continued safe and compliant storage at the ISA is preferred over a high cost, near-term shipment/treatment/waste return process involved with offsite treatment.

In the July 11, 2014, letter, Ecology states that the current, approved Closure Plan for the 400 Area Waste Management Unit does not contain a detailed description of the steps for closure or a complete closure schedule for the Fuel Storage Facility (FSF) or the ISA. Ecology recommended that the Closure Plan be revised to address these items and the disposal of residual sodium (not just bulk sodium), and be resubmitted as a permit modification. RL and CHPRC understand that Ecology is seeking additional detail on several closure plans for various units in the sitewide RCRA permit. We recommend that the specifics of this additional detail be identified and described as part of the Revision 9 permit renewal process currently underway with Ecology and the Hanford Permittees. Diverting already limited resources to revising this Closure Plan at this time would interfere with higher priority permit modification activities and adversely impact re-issuance of the Revision 9 permit, which is contrary to both Ecology and RL goals and objectives.

The closure schedule of the FSF and the ISA is directed by the Tri-Party Agreement M-036-01 Milestone series on lifecycle cost planning and the Tri-Party Agreement M-092-09 Milestone for sodium disposition. These milestones and the Land Disposal Restriction (LDR) reports identify the waste at the 400 Area and the proposed treatment schedule to begin after 2015. As described in the approved Addendum H of the Part III Operating Unit Group 16 of the RCRA permit, the schedule will be provided in detail at least 45 days in advance of start of closure. Closure is to be completed within 180 days after the start of closure activities.

If you have any questions, please contact us, or your staff may contact Ray Corey, Assistant Manager for the River and Plateau, on (509) 373-9971.

Doug S. Shoop, Acting Manager
U.S. Department of Energy
Richland Operations Office

for
John C. Fulton, President and
Chief Executive Officer
CH2M HILL Plateau Remediation Company

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Ecology NWP Library
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